

Software and Automation Session Summary

Chairs: Werner Gurtner and Jan McGarry

Automation continues to increase throughout the ILRS Network as can be seen in the presentations by Pearson on Mt Stromlo, Pierron on FTLRS, and Xin on TROS. Automation calls for more and more complicated software. Matt Pearson showed that software of the future needs to be modular, loosely coupled, flexible and reusable.

Automation improvements occur in both the hardware and software. Hardware enhancements were presented by Degnan on the SLR2000 beam expander, Wang on new control systems for San Juan, and the use of FPGAs in SLR systems digital design at Beijing by Li and at TROS by Xin.

Chris Moore demonstrated in his presentation that an automated system can perform as well as a manually operated system by giving statistics for Mt Stromlo when it was fully automated and when it was manually controlled.

Werner Gurtner showed that other work can share the telescope system in an automated way with SLR at no performance loss, given the right software to control the system.

New tools and formats are helping SLR stations in their transition to new technologies and in capturing these changes as they happen. This was seen in the presentations by Salminsh on web applications for engineering, and on the Consolidated Prediction and Consolidated Data Formats by Ricklefs.

The presentation by Heiner and Schreiber showed how to improve automated real-time signal processing by reprocessing (looking behind and projecting ahead) which can provide a 10–40% improvement over normal histogram analysis.

Progress in automation, reliability, performance and maintainability continues to be made at stations across the ILRS. Each group has their own approach to improvements. Sharing of these different technical approaches is the most important part of the Workshops.